# Correspondence

*Letters should not exceed 400 words and should be typed double spaced (including the references) and be signed by all authors*

TO THE EDITOR, *Genitourinary Medicine*

## Increase in new patients with genital warts attending STD clinics in Helsinki, 1980–6

Sir,

The two sexually transmitted disease (STD) clinics in Helsinki serve a population of about 1·5 million. Recent reports have clearly indicated that genital warts are common and their incidence appears to be increasing.[1 2] Although the information available is based on cases diagnosed at STD clinics and a high proportion of underdiagnosing occurs,[3] genital warts currently constitute the most important STD after chlamydial infection and gonorrhoea.

We report the new cases of genital warts diagnosed at the STD clinics in Helsinki in comparison with new cases of gonorrhoea and the total number of new patients in 1980–6 (table).

During the study period the numbers of new patients increased 1·6-fold, and the number with genital warts increased 2·8-fold. Gonorrhoea decreased 1·4-fold. Diagnosed cases of genital warts increased from 4·9% to 8·8% of new patients and at the same time gonorrhoea decreased from 19·2% to 8·5%. The incidence of genital warts increased slowly until 1985, but during the past two years the increase has been fast. Genital warts have probably reached an epidemic level in Finland. This is of the utmost importance as certain human papillomavirus (HPV) types may induce genital neoplasia.

Yours faithfully,

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Table *Genital warts and gonorrhoea diagnosed at the two STD clinics in Helsinki, 1980–6*

| *Year* | *No of new patients* | *No (%) of new patients with genital warts* | *No (%) of new patients with gonorrhoea* |
|---|---|---|---|
| 1980 | 13731 | 667 (4·9) | 2640 (19·2) |
| 1981 | 13432 | 717 (5·3) | 2159 (16·1) |
| 1982 | 13436 | 994 (7·4) | 2660 (19·8) |
| 1983 | 14809 | 1004 (6·8) | 2156 (14·6) |
| 1984 | 15992 | 1095 (6·8) | 2018 (12·6) |
| 1985 | 19100 | 1368 (7·2) | 2230 (11·7) |
| 1986 | 21557 | 1889 (8·8) | 1883 (8·7) |

### References

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TO THE EDITOR, *Genitourinary Medicine*

## How reliable is cell culture for detecting *Chlamydia trachomatis* in patients with urogenital inflammation?

Sir,

Cell culture for isolating *Chlamydia trachomatis* was introduced in 1965 by Gordon and Quan.[1] This method, modified by Ripa and Mårdh in 1977 by pretreating the cell culture tissue with cycloheximide,[2] has since been regarded as the most reliable test for detecting *C trachomatis* in patients with urogenital inflammation. During recent years new methods, based on fluorescein conjugated monoclonal antibody against *C trachomatis* and on the enzyme immunoassay technique, have been introduced to detect chlamydial antigen. Almost all these tests have been evaluated according to the results obtained by cell culture, but how reliable is this method?

In the study published here, samples taken from the urogenital tract of patients with clinical symptoms of infection, were analysed by cell culture using cycloheximide treated McCoy cells,[2] by a fluorescein conjugated monoclonal antibody test (Micro-Trak, Syva),[3] and by an enzyme immunoassay (Chlamydiazyme, Abbott Laboratories).[4] A total of 150 patients, 70 women and 80 men, were tested by all three methods for urethral and (in the women) cervical *C trachomatis*; 30 of the 150 patients were chlamydia positive when examined by the cell culture method. All three tests gave positive results in 22, negative results in 93, and conflicting results in 35 patients.

The Chlamydiazyme test was negative in six of the 30 cell culture positive patients and positive in 11 of the 120 culture negative patients (sensitivity 88%; specificity 96%; false positive rate 4%; false negative rate 12%). The Micro Trak test gave negative results in four of the culture positive and positive results in 22 of the culture negative patients (sensitivity 94%; specificity 86%; false positive rate 14%; false negative rate 6%). Similarly, cell culture gave negative results in six of the 28 patients who had a positive result when examined by the two other tests, and positive results in two of the 95 patients who were found negative by Micro Trak and Chlamydiazyme tests (sensitivity 82%; specificity 98%; false positive rate 2%; false negative rate 18%). The above calculations were made on the assumption that results that were positive in two tests were true positives, and results that were positive in only one test or negative in all three tests were true negatives.

These results clearly show that none of the three methods tested are completely reliable. All give false negative and false positive results. The traditional use of results obtained by the cell culture method for testing the reliability of newly introduced methods is not valid as eight results obtained by cell culture were false positives or negatives based on concordance with the two other tests.

This lack of reliability of cell culture is not surprising: the principle of the test is that vital chlamydial antigen is transferred from the urogenital tract of the patient via a swab

and transport medium to the cell culture, where the antigen has to multiply in the cytoplasm of the McCoy cells. Positive chlamydia culture is registered if intracytoplasmic inclusions are seen in the McCoy cells. Several factors may, however, affect the vitality of the chlamydial elementary bodies. Some of the most critical points are the collection of samples, the toxicity of the swabs, temperature during transport, transport time, growth medium, and bacterial contamination of the cell culture. Optimum conditions for all these factors are essential for chlamydial antigen to be recovered. The two other test systems are based on identifying non-vital antigen, which means that these factors are less important for the monoclonal antibody test and the enzyme immunoassay. False positive results of cell culture may occur by misreading iodine stained epithelial cells as chlamydial inclusions, but may also be caused by contamination with charcoal particles from charcoal swabs or infection of the cell culture medium with bacteria, viruses, or mycoplasmas.

As all the methods available for testing for urogenital chlamydial infection give an appreciable number of false positive or negative results, it is important that discrepancies between test results, clinical manifestations, and responses to antibiotic treatment should lead to repeat testing and contact tracing.

Yours faithfully,
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1 Gordon FB, Quan LA. Isolation of the trachoma agent in cell culture. *Proc Soc Exp Biol Med* 1965;**118**:354–9.
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TO THE EDITOR, *Genitourinary Medicine*

**Acute syphilitic myelitis in a young man**

Sir,

We read with great interest the paper of Lowenstein, Mills, and Simon (*Genitourin Med* 1987;**63**:333–8) concerning a man aged 26 who had acute syphilitic myelitis. Two years ago we published a report of a similar case, among other early manifestations of neurosyphilis.[1]

Our patient was a man aged 17 seen in 1982 with flaccid paraplegia of rapid onset. Analysis of the cerebrospinal fluid (CSF) showed a protein concentration of 1·06 g/l and white cell count of 180 × $10^6$/l with a differential count of 85% lymphocytes and numerous plasma cells. His serum in the Venereal Disease Research Laboratory (VDRL) test was positive at a titre of 1/16 and in the fluorescent treponemal antibody absorbed (FTA-ABS) test at a titre of 1/6400. His CSF FTA-ABS test result was positive at a titre of 1/100.

Despite treatment with penicillin and non-reactive CSF at the end of treatment, his paraplegia evolved towards spasticity. Two months before the onset of the neurological manifestations, the patient had had a transient non-pruritic rash on the trunk consistent with roseola. Acute syphilitic myelitis classically belongs to the tertiary stage. Onset during the secondary stage may have been caused by concomitant HIV infection.

Yours faithfully,
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**Reference**

1 Janier M, Pertuiset BF, Poisson M, Bleibel JM, Buge A. Manifestations précoces de la syphilis neuro-méningée. Revue de la littérature à propos de trois formes graves. *Ann Dermatol Venereol* 1985;**112**:133–40.

TO THE EDITOR, *Genitourinary Medicine*

**Prescribing policies for gonorrhoea in the United Kingdom**

Sir,

We seek the courtesy of your columns to report the findings of a survey of prescribing policies for β-lactamase (penicillinase) producing *Neisseria gonorrhoeae* (PPNG) strains in the United Kingdom, which was carried out by the British Co-operative Clinical Group.

During 1986 self administered postal questionnaires were distributed to all consultant physicians working in genitourinary medicine clinics in the United Kingdom. Information was sought about the numbers of PPNG strains isolated in each clinic during the last quarters of 1982 and 1985. In addition, responding clinicians were asked to indicate their choice of antibiotics in different clinical situations during those periods. We received 127 replies, of which six were incomplete. This represented a response rate of 61% (127/209). The table summarises the choices of antibiotics.

We identified three changes between responses for 1982 and 1985, which comprised a drop in the mean number of isolates in each clinic from 1·64 in1982 to 1·18 in 1985 (not a significant difference), a slight (not significant) shift away from penicillin towards the use of spectinomycin in all clinical situations, and a slight (not significant) shift towards the use of cephalosporins for patients infected overseas.

In general, patterns of prescribing showed little change between heterosexual men, homosexual men, and women. It was interesting that penicillin remained the drug of first choice of four fifths of responding clinics, but spectinomycin was the first choice for treatment failures and for those infected overseas. Very few responders reported the use of either new antibiotics, such as quinolones, or of mixed antibiotic regimens.

Although PPNG strains are now endemic at a low level in the United Kingdom, the continued reliance upon cheap antibiotics in the standard treatment of gonorrhoea contrasts with the situation in many developing countries where PPNG strains predominate and necessitate more expensive single or combination antibiotics in routine treatment.

Most clinics routinely use an antibiotic active against PPNG strains as the first line treatment of gonococcal infections acquired overseas. This may be one factor accounting for the falling incidence of PPNG strains in the United Kingdom.

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